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Provincial Distribution of Federal Expenditures and Personnel on Science and Technology, 1997/1998 to 2003/2004

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- ^r revised
- x suppressed to meet the confidentiality requirements of the *Statistics Act*
- ^E use with caution
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Note

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Statistics Canada
Science and Innovation Surveys Section
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Provincial Distribution of Federal Expenditures and Personnel on Science and Technology, 1997/1998 to 2003/2004

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Overview

This document presents the geographical distribution of federal government expenditures on science and technology (S&T). The statistics presented in this report supplement data published in the Service Bulletin "Science Statistics" Vol. 30, No. 1, Catalogue 88-001XIE published in February, 2006. S&T expenditures can be divided into research and development (R&D) and related scientific activities (RSA). In this document, there are two other divisions which can be applied to any expenditure. They are science type (natural and social) and sector of performance (intramural versus extramural).

The terms "natural sciences" and "social sciences" are to be regarded as synonymous with "natural sciences and engineering" and "social sciences and humanities" respectively. "Total sciences" includes data for both "natural sciences" and "social sciences". Any information for "social sciences" that is not displayed in this report can be derived by subtracting the figures for "natural sciences" from those for "total sciences".

Included in this report are tables presenting expenditures and staff of federal government scientific establishments for the fiscal year 2003/2004.

In 2003/2004, the federal government spent a total of \$8.8 billion on S&T. Of this amount, \$5.3 billion, or 60%, was spent in the provinces and territories. The rest consists of categories of expenditures which are not distributed geographically. They are the following:

- All federal expenditures in the National Capital Region (NCR) for the performance of S&T in federal institutions (intramural S&T). These expenditures totaled \$2.6 billion;
- All payments made abroad for S&T, which amounted to \$288 million; and
- Various other payments of federal expenditures which could not be assigned geographically, amounting to \$501 million.

Expenditures and personnel for S&T performed by the federal government in the National Capital Region (NCR) are excluded from the provincial totals and are reported separately. The NCR is, in effect, treated as a separate entity, however, these data distributed geographically, are presented.

Estimates of S&T activities by region may be easily misunderstood. For example, the financial data are identified with the region of the physical location of an S&T unit. It would be wrong to assume all of the expenditures of a unit are spent in the region of location. Supplies and equipment can be purchased from other regions or countries. Furthermore, in cases such as the National Capital Region, labour moves freely between the two provinces so that even wages and salaries paid by a unit are partly spent outside the area of location.

We are grateful to the departments and agencies that completed our questionnaires. Without their co-operation a provincial representation such as this could not be prepared.

This report was prepared by **Gisèle Bellefeuille**, Subject Matter Officer under the direction of **Lloyd Lizotte**, Subject Matter Manager, Science, Innovation and Electronic Information Division.

Highlights

Of the total \$8.8 billion spent by the federal government on science and technology (S&T) in 2003/2004, \$8.0 billion could be distributed geographically. Federal expenditures that were not distributed geographically amounted to \$789 million, of which \$288 million consisted of federal S&T payments made abroad and \$501 million were payments that could not be distributed geographically.

Federal expenditures in the provinces and territories amounted to \$5.3 billion or 67% of the geographically distributed spending. The National Capital Region (NCR) received \$2.6 billion in federal S&T spending or 33% of the \$8 billion. The amount of federal S&T spending concentrated in the NCR has declined from 37% in 1997/1998 to its current level of 33%.

Federal (S&T) spending in the provinces and territories is mainly comprised of spending in the natural sciences. The natural sciences include engineering, mathematics, life and physical sciences.

Geographically distributed federal spending on the social sciences amounted to just 22% or \$1.8 billion of the \$8 billion of which two-thirds was spent in the NCR.

In the social sciences just 30% of the geographically distributed federal spending in 2003/2004 was on R&D, the rest was spent on related scientific activities such as general purpose data collection, maintenance of national standards and testing, feasibility studies and policy-related studies.

For the most part, regionally distributed federally funded research and development (R&D) in social sciences is undertaken in the higher education sector with just 23% conducted by the federal government.

When compared to 2002/2003 information, 2003/2004 regional distribution registered strong increases in Prince Edward Island (\$8 million), Yukon, Northwest Territories and Nunavut (\$11 million), Ontario (\$457 million) and Alberta (\$75 million). There are two federal S&T programs which are responsible for the large increase in Ontario: the Canadian Foundation for Climate and Atmospheric Sciences (\$50 million) and Sustainable Development Technology Fund (\$125 million).

Federal expenditures on intramural science and technology, those activities primarily conducted by federal government employees, represented 57% of the geographically distributed spending. The NCR accounted for 58% of this federal intramural spending on S&T and 48% of federal intramural spending on R&D.

Federal extramural expenditures on S&T and R&D for the NCR are distributed in the provinces of Quebec and Ontario. Extramural expenditures include federal support for S&T activities performed by Canadian business enterprises, institutions of higher education, the non profit sector and other sectors.

Of the twenty-one census metropolitan areas for which federal extramural S&T expenditures are available, the most (\$613 million) was spent in Montréal. Ottawa-Gatineau received \$582 million, Toronto \$492 million and Vancouver \$320 million in 2003/2004. The majority of the federal extramural expenditures were for R&D.

In 2003/2004 personnel performing S&T activities in federal establishments amounted to 34,707 full-time equivalents (FTEs). The majority of these personnel were located in the NCR (20,763 FTEs or 60%). Of the remaining 13,944 FTEs employed outside of the NCR, 3,451 FTEs were employed in Ontario and 3,228 FTEs in Quebec.

Environment Canada employed the 1,097 FTEs to perform S&T activities in Ontario outside of the NCR. The second largest employer in Ontario was Atomic Energy of Canada Limited with 928 FTEs in 2003/2004.

In 2003/2004 for Quebec, again excluding the NCR, the federal department employing the most personnel to perform S&T activities was the National Research Council (548 FTEs), Environment Canada and the Canadian Space Agency with 526 FTEs and 502 FTEs respectively.

In three of the four Atlantic provinces, in 2003/2004, Fisheries and Oceans had the highest number of personnel performing S&T activities with 208 FTEs in Newfoundland, 390 FTEs in Nova Scotia and 98 FTEs in New Brunswick. In Prince Edward Island, Agriculture Canada had the highest number of FTEs with 104 performing S&T activities in 2003/2004.

In Manitoba, Health Canada led the other federal departments with 213 FTEs performing S&T activities in 2003/2004.

Similar to Prince Edward Island, in Saskatchewan, Agriculture Canada led the other federal departments with 278 FTEs performing S&T activities in 2003/2004. While Agriculture Canada (248 FTEs) was in the top three for Alberta, National Defence with 423 FTEs performing S&T activities led with Natural Resources Canada (323 FTEs) placing second in 2003/2004.

On the west coast, Fisheries and Oceans once again was the largest employer of personnel performing S&T activities in British Columbia with 422 FTEs in 2003/2004. The same held true for Yukon, the Northwest Territories and Nunavut as Fisheries and Oceans had 116 FTEs performing S&T activities in 2003/2004.

Department / Program names and abbreviations

ACOA	- Atlantic Canada Opportunities Agency
AECL	- Atomic Energy of Canada Limited
AGR	- Agriculture and Agri-Food Canada
BOC	- Bank of Canada
C&I	- Citizenship and Immigration
CCMD	- Canadian Centre for Management Development
CCRA	- Canada Customs and Revenue Agency
CED(QUÉ)	- Canada Economic Development (Quebec Regions)
CFI	- Canada Foundation for Innovation
CFIA	- Canadian Food Inspection Agency
CH	- Canadian Heritage
CHRC	- Canadian Human Rights Commission
CIDA	- Canadian International Development Agency
CIHR	- Canadian Institutes of Health Research
CMC	- Canadian Museum of Civilization
CMHC	- Canada Mortgage and Housing Corporation
CMN	- Canadian Museum of Nature
CNSC	- Canadian Nuclear Safety Commission
COL	- Commissioner of Official Languages
CSA	- Canadian Space Agency
CSPS	- Canada School of Public Service
CSTM	- Canada Science and Technology Museum
EC	- Environment Canada
F&O	- Fisheries and Oceans
FA&IT	- Foreign Affairs and International Trade
FIN	- Finance
GC	- Genome Canada
HC	- Health Canada
HRSDC	- Human Resources and Skills Development Canada
IAND	- Indian Affairs and Northern Development
IDRC	- International Development Research Centre
IND	- Industry Canada
JUS	- Justice
NA	- National Archives
NDEF	- National Defence
NEB	- National Energy Board
NFB	- National Film Board

- NGC - National Gallery of Canada
- NL - National Library
- NRC - National Research Council
- NRCan - Natural Resources Canada
- NSERC - Natural Sciences and Engineering Research Council
- PCO - Privy Council Office
- PCA - Parks Canada Agency
- PSC - Public Service Commission of Canada
- PSHRMAC - Public Service Human Resource Management Agency of Canada
- PW&GS - Public Works and Government Services
- RCMP - Royal Canadian Mounted Police
- SDC - Social Development Canada
- SGEN - Solicitor General
- SSHRC - Social Sciences and Humanities Research Council
- STC - Statistics Canada
- TB - Treasury Board
- TC - Transport Canada
- WEDC - Western Economic Diversification Canada

- S&P - Scientific and Professional
- S&T - Science and Technology (R&D plus RSA = S&T)
- R&D - Research and Development
- RSA - Related Scientific Activities
- NSE - Natural Sciences and Engineering
- SSH - Social Sciences and Humanities
- NCR - National Capital Region

Definitions

Science and technology

Science and technology activities are the sum of research and development (R&D) plus related scientific activities (RSA). S&T activities are required for the generation, dissemination or initial application of new science and technology knowledge.

Scientific research and experimental development (R&D)

Creative work undertaken on a systematic basis in order to increase the stock of scientific and technical knowledge and to use this knowledge in new applications.

An R&D project generally has three characteristics:

- a substantial element of uncertainty, novelty and innovation;
- a well-defined project design;
- a report on the procedures and results of the projects

Related scientific activities (RSA)

Those activities which complement and extend R&D by contributing to the generation, dissemination and application of scientific and technological knowledge.

Definitions for the natural sciences and engineering

The natural sciences and engineering (NSE) field embraces the disciplines of study concerned with understanding, exploring, developing or utilizing the natural world. Included are the engineering, mathematical, life and physical sciences.

Definitions for the social sciences and humanities

The social sciences and humanities (SSH) field embraces all disciplines involved in studying human actions and conditions and the social, economic and institutional mechanisms affecting humans. Included are such disciplines as anthropology, demography, economics, geography, history, languages, literature and linguistics, law, library science, philosophy, political science, psychology, religious studies, social work, sociology, and urban and regional studies.

Intramural performance

Where the S&T activities are managed and carried out primarily by federal government employees they are classified as intramural S&T. Even where major components of the project are provided by outside agencies, such as computer services, laboratory construction, testing of prototype equipment, if the planning, supervision, reporting, and key operating functions are performed by federal personnel, then the activity is considered to be intramural. This also applies to S&T activities carried out by a department or agency on behalf of another federal department or agency on a cost recovery basis.

The intramural expenditures reported for scientific activities are those direct costs, including salaries, associated with scientific programs. These costs include that portion of a program's contribution to employee benefit plans (e.g. superannuation) which is applicable to the scientific personnel within the program. Non-program ("in direct") costs, such as the value of services provided by other departments without charge and accommodation provided by the reporting program are also included.

Extramural performance

The management and conduct of an S&T activity is entrusted to a non-federal organization. The six extramural performance sectors used in surveying S&T expenditures by the Federal Government are:

- (i) **Canadian business enterprises.** This sector is composed of business and government enterprises, including public utilities and government owned firms and frequently referred to as the industry sector. Incorporated consultants providing scientific and engineering services are also included. Industrial research institutes located at Canadian universities are considered to be in the university sector.
- (ii) **Higher education.** This sector is made up of all Canadian universities, including affiliated institutes owned, administered or staffed by universities.
- (iii) **Canadian private non profit institutions.** Charitable foundations, voluntary health organizations, scientific and professional societies, and other organizations not established to earn profits comprise this sector. Private non-profit institutions primarily serving or controlled by another sector should be included in that sector (e.g., the Pulp and Paper Research Institute is in Canadian business enterprises).
- (iv) **Canadian provincial and municipal governments.** Departments and agencies of these governments form this sector. Government enterprises, such as provincial utilities are included in the Canadian business enterprises sector, and hospitals in the Canadian non-profit institutions or university sector.
- (v) **Other Canadian performers.** This sector includes all individuals or organizations not belonging to any of the above sectors. In particular, it includes provincial research councils and foundations.
- (vi) **Foreign performers.** All foreign governments, foreign companies (including foreign subsidiaries of Canadian firms), international organizations, non resident foreign nationals and Canadians studying or teaching abroad, are included in this sector.

Type of payment

- (i) **Contracts.** These are payments to organizations or individuals outside the federal government for the conduct of S&T by the recipient or to provide support for the federal government's in-house S&T programs.
- (ii) **Grants and contributions.** Awards to organizations or individuals for the conduct of S&T and intended to benefit the recipients rather than provide the program with goods, services or information.
- (iii) **Research fellowships.** Awards to individuals for advanced research training and experience. Such payments are included as expenditures for R&D activities. Awards intended primarily to support the education of the recipients are reported as education support.

Personnel

Intramural expenditure data should be supported by data on the personnel devoted to scientific activities by all the employees engaged in these activities.

Scientific and professional - people in jobs that require at least one academic degree or nationally recognized professional qualification (e.g., Professional Engineer P.Eng.), as well as those with equivalent experience.

Technical - people in jobs that require specialized vocational or technical training beyond the secondary level (e.g., community colleges and technical institutes) as well as those with experience equivalent to this training.

R&D personnel: Calculated in full-time equivalent (FTE). R&D may be carried out by persons who work solely on R&D projects or by persons who devote only part of their time to R&D, and the balance to other activities such as testing, quality control and production engineering. To arrive at the total effort devoted to R&D in terms of person-years, it is necessary to estimate the full-time equivalent (FTE) of these persons working only part-time in R&D.

Full-time equivalent (FTE)

Full-time equivalent is a number of persons who work solely on R&D projects + estimate of time of persons working only part of their time on R&D.

Example calculation:

If out of five scientists engaged in R&D work, one works solely on R&D projects and the remaining four devote only one quarter of their working time to R&D, then: $FTE = 1 + 1/4 + 1/4 + 1/4 + 1/4 = 2$ scientists.

Higher education research and development (HERD)

HERD is equal to intramural expenditures on research and development in the higher education sector which includes all Canadian universities and colleges as well as affiliated institutes owned, administered or staffed by universities and colleges.

Business enterprise research and development (BERD)

BERD is equal to intramural expenditures on research and development in the Canadian business enterprise sector which is comprised of business and government enterprises, including public utilities and government-owned firms.

Census metropolitan area

Census metropolitan area is defined by Statistics Canada as one or more adjacent municipalities centered on a large urban area. The census population count of a CMA is at least 100,000 persons.

Federal scientific establishment

A federal scientific establishment is a laboratory, research station or regional office belonging to the federal government, with its own budget, which performs scientific and technological activities.

Statistical tables

Table 1 Federal expenditures on S&T, by province and territories, 1997/1998 to 2003/2004

Province and territories	Year						
	1997/98	1998/99	1999/00	2000/01	2001/02 ^r	2002/03 ^r	2003/04
millions of dollars							
Total sciences							
Newfoundland and Labrador	71	86	87	101	95	117	121
Prince Edward Island	14	17	20	29	26	24	32
Nova Scotia	175	200	192	220	225	247	257
New Brunswick	65	75	76	68	82	102	100
Quebec	787	788	834	1,017	1,381	1,243	1,329
Ontario	1,141	1,143	1,309	1,347	1,653	1,582	2,039
Manitoba	149	136	161	190	211	214	195
Saskatchewan	120	122	131	148	165	151	159
Alberta	247	254	300	327	476	395	470
British Columbia	373	446	529	479	525	582	588
Yukon, N.W.T., and Nunavut	16	15	20	28	34	35	46
Canada (Excluding NCR)	3,158	3,282	3,659	3,954	4,873	4,692	5,336
National Capital Region*	1,819	1,942	1,981	2,130	2,603	2,608	2,642
Canada (Including NCR)	4,977	5,224	5,640	6,084	7,476	7,300	7,978
Natural sciences							
Newfoundland and Labrador	65	79	81	93	86	111	111
Prince Edward Island	14	17	19	27	23	22	30
Nova Scotia	150	172	172	186	194	227	225
New Brunswick	61	71	68	64	64	96	89
Quebec	733	734	772	944	1,116	1,168	1,181
Ontario	1,037	1,035	1,200	1,210	1,428	1,441	1,797
Manitoba	137	122	147	172	191	201	174
Saskatchewan	115	116	125	140	151	144	146
Alberta	231	238	284	301	430	372	419
British Columbia	340	419	495	439	463	548	521
Yukon, N.W.T., and Nunavut	11	9	15	21	29	31	42
Canada (Excluding NCR)	2,895	3,012	3,377	3,597	4,175	4,361	4,735
National Capital Region*	979	1,046	1,058	1,089	1,345	1,382	1,457
Canada (Including NCR)	3,874	4,058	4,435	4,686	5,520	5,743	6,192

* Federal intramural expenditures only.

Table 2 Federal expenditures on R&D, by province and territories, 1997/1998 to 2003/2004

Province and territories	Year						
	1997/98	1998/99	1999/00	2000/01	2001/02 ^f	2002/03 ^f	2003/04
millions of dollars							
Total sciences							
Newfoundland and Labrador	40	47	53	64	58	76	81
Prince Edward Island	13	16	17	24	22	17	25
Nova Scotia	107	120	120	135	137	152	151
New Brunswick	46	55	53	50	59	76	72
Quebec	639	629	671	843	1,068	1,028	1,092
Ontario	913	935	1,045	1,058	1,396	1,276	1,632
Manitoba	94	85	101	122	134	135	120
Saskatchewan	96	86	102	118	133	116	118
Alberta	196	204	249	264	398	297	364
British Columbia	262	334	400	320	382	426	426
Yukon, N.W.T., and Nunavut	5	4	8	12	5	5	6
Canada (Excluding NCR)	2,411	2,515	2,819	3,010	3,792	3,604	4,087
National Capital Region*	757	812	821	889	925	1,015	999
Canada (Including NCR)	3,168	3,327	3,640	3,899	4,717	4,619	5,086
Natural sciences							
Newfoundland and Labrador	39	46	51	61	51	74	75
Prince Edward Island	13	15	17	23	21	16	24
Nova Scotia	104	117	117	130	125	148	137
New Brunswick	45	54	52	48	43	74	66
Quebec	617	608	643	809	973	984	981
Ontario	873	882	996	994	1,247	1,195	1,465
Manitoba	91	82	97	118	124	131	110
Saskatchewan	95	85	101	116	124	112	109
Alberta	190	198	241	253	364	284	326
British Columbia	251	322	385	302	341	406	376
Yukon, N.W.T., and Nunavut	5	4	8	11	4	5	6
Canada (Excluding NCR)	2,323	2,413	2,708	2,865	3,417	3,429	3,675
National Capital Region*	689	736	736	805	835	900	881
Canada (Including NCR)	3,012	3,149	3,444	3,670	4,252	4,329	4,556

* Federal intramural expenditures only.

Table 3 Federal government R&D payments to Canadian business enterprise, by province and territories, 1997/1998 to 2003/2004

Province and territories	Year						
	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
millions of dollars							
Total sciences							
Newfoundland and Labrador	6	9	10	11	8	17	23
Prince Edward Island	2	4	2	5	3	5	5
Nova Scotia	16	10	10	12	20	23	18
New Brunswick	8	9	8	5	7	9	11
Quebec	226	176	158	187	252	239	222
Ontario	328	312	267	235	423	301	318
Manitoba	11	10	12	11	13	13	8
Saskatchewan	6	8	8	8	9	9	9
Alberta	24	21	25	21	26	21	37
British Columbia	58	117	142	49	54	64	65
Yukon, N.W.T., and Nunavut	..	..	..	1	1	0	1
Canada	685	676	642	545	816	701	717
Natural sciences							
Newfoundland and Labrador	6	9	9	11	8	17	23
Prince Edward Island	2	4	2	5	3	5	5
Nova Scotia	16	10	10	12	20	23	18
New Brunswick	8	9	8	5	7	9	11
Quebec	226	176	158	186	252	239	222
Ontario	327	311	267	235	421	298	317
Manitoba	11	10	12	11	13	13	8
Saskatchewan	6	8	8	8	9	8	9
Alberta	24	21	25	21	26	21	37
British Columbia	58	117	142	49	54	64	65
Yukon, N.W.T., and Nunavut	..	..	..	1	1	0	1
Canada	684	675	641	544	814	697	716

Table 4 Federal government R&D payments to the higher education sector, by province and territories, 1997/1998 to 2003/2004

Province and territories	Year						
	1997/98	1998/99	1999/00	2000/01	2001/02 ^r	2002/03 ^r	2003/04
millions of dollars							
Total sciences							
Newfoundland and Labrador	9	10	15	18	19	20	31
Prince Edward Island	1	1	2	2	2	3	7
Nova Scotia	20	23	36	31	43	42	58
New Brunswick	7	11	10	11	23	16	23
Quebec	185	209	252	291	421	399	513
Ontario	246	292	360	456	561	591	716
Manitoba	20	23	28	34	40	46	44
Saskatchewan	14	22	27	41	55	50	51
Alberta	73	85	104	114	164	161	220
British Columbia	120	131	149	152	202	228	261
Yukon, N.W.T., and Nunavut	0	0	0	0	0	0	0
Canada	695	807	983	1,150	1,530	1,556	1,924
Natural sciences							
Newfoundland and Labrador	9	9	13	16	14	18	25
Prince Edward Island	1	1	2	2	1	3	6
Nova Scotia	18	21	33	28	32	39	45
New Brunswick	7	10	9	10	8	14	17
Quebec	164	190	226	264	334	359	405
Ontario	221	267	327	419	445	539	573
Manitoba	19	21	25	32	31	43	34
Saskatchewan	13	21	26	40	47	47	42
Alberta	67	80	97	105	132	149	183
British Columbia	110	120	135	138	165	211	213
Yukon, N.W.T., and Nunavut	0	0	0	0	0	0	0
Canada	629	740	893	1,054	1,209	1,422	1,543

Table 5 Federal expenditures on intramural S&T, by province and territories, 1997/1998 to 2003/2004

Province and territories	Year						
	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
millions of dollars							
Total sciences							
Newfoundland and Labrador	48	57	56	63	61	67	61
Prince Edward Island	11	11	15	20	19	14	19
Nova Scotia	134	152	142	168	153	162	158
New Brunswick	45	50	48	42	46	69	54
Quebec	328	350	373	488	527	525	480
Ontario	445	398	482	516	500	523	516
Manitoba	107	92	110	128	148	146	128
Saskatchewan	92	84	82	87	90	84	89
Alberta	136	129	142	160	159	172	173
British Columbia	171	176	210	218	219	228	216
Yukon, N.W.T., and Nunavut	15	14	17	23	30	32	43
Canada (Excluding NCR)	1,532	1,513	1,677	1,913	1,952	2,022	1,937
National Capital Region*	1,819	1,942	1,981	2,130	2,603	2,608	2,642
Canada (Including NCR)	3,351	3,455	3,658	4,043	4,555	4,630	4,579
Natural sciences							
Newfoundland and Labrador	44	53	53	59	59	65	58
Prince Edward Island	11	11	14	19	18	13	18
Nova Scotia	113	129	123	140	136	148	141
New Brunswick	44	49	47	41	45	66	51
Quebec	306	327	353	460	493	505	456
Ontario	430	384	468	492	465	495	480
Manitoba	99	84	103	118	139	139	120
Saskatchewan	89	80	79	83	87	82	87
Alberta	130	122	137	150	149	165	164
British Columbia	162	166	200	203	204	219	206
Yukon, N.W.T., and Nunavut	10	8	13	18	26	29	39
Canada (Excluding NCR)	1,438	1,413	1,590	1,783	1,821	1,926	1,820
National Capital Region*	979	1,046	1,058	1,089	1,345	1,382	1,457
Canada (Including NCR)	2,417	2,459	2,648	2,872	3,166	3,308	3,277

* Federal intramural expenditures only.

Table 6 Federal expenditures on extramural S&T, by province and territories, 1997/1998 to 2003/2004

Province and territories	Year						
	1997/98	1998/99	1999/00	2000/01	2001/02 ^f	2002/03 ^f	2003/04
	millions of dollars						
Total sciences							
Newfoundland and Labrador	23	28	31	38	34	50	60
Prince Edward Island	3	6	5	9	7	10	13
Nova Scotia	41	48	55	52	72	85	99
New Brunswick	19	25	23	26	36	33	46
Quebec	459	438	461	529	854	718	849
Ontario	696	745	827	831	1,153	1,059	1,523
Manitoba	43	44	51	62	63	68	67
Saskatchewan	28	38	49	61	75	67	70
Alberta	111	125	158	167	317	223	297
British Columbia	201	270	319	261	306	354	372
Yukon, N.W.T., and Nunavut	2	1	3	5	3	3	3
Canada	1,626	1,769	1,982	2,041	2,920	2,670	3,399
Natural sciences							
Newfoundland and Labrador	21	26	28	35	27	46	53
Prince Edward Island	3	6	5	8	5	9	12
Nova Scotia	37	43	49	45	59	79	84
New Brunswick	17	23	21	23	19	30	38
Quebec	427	406	419	484	623	663	725
Ontario	608	651	731	718	963	946	1,317
Manitoba	37	38	44	53	52	62	54
Saskatchewan	26	36	46	57	65	62	59
Alberta	101	116	147	151	280	206	255
British Columbia	178	253	295	237	259	329	315
Yukon, N.W.T., and Nunavut	1	1	2	3	2	3	3
Canada	1,457	1,599	1,787	1,814	2,354	2,435	2,915

Table 7 Federal expenditures on intramural R&D, by province and territories, 1997/1998 to 2003/2004

Province and territories	Year						
	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
millions of dollars							
Total sciences							
Newfoundland and Labrador	23	26	25	30	27	32	23
Prince Edward Island	10	10	12	16	16	8	12
Nova Scotia	71	77	72	88	70	76	66
New Brunswick	29	31	32	27	26	46	30
Quebec	211	226	249	350	372	370	314
Ontario	302	276	309	314	328	324	350
Manitoba	59	48	58	68	77	72	63
Saskatchewan	74	54	60	62	63	52	54
Alberta	96	94	108	116	98	92	87
British Columbia	83	85	106	111	97	99	80
Yukon, N.W.T., and Nunavut	5	4	7	9	3	4	5
Canada (Excluding NCR)	963	931	1,038	1,191	1,177	1,175	1,084
National Capital Region*	757	812	821	889	926	1,015	999
Canada (Including NCR)	1,720	1,743	1,859	2,080	2,103	2,190	2,083
Natural sciences							
Newfoundland and Labrador	23	26	25	30	27	32	23
Prince Edward Island	10	10	12	16	16	8	12
Nova Scotia	71	77	72	88	70	76	66
New Brunswick	29	31	32	27	26	46	30
Quebec	211	226	249	349	372	370	314
Ontario	302	276	309	314	326	322	348
Manitoba	58	48	58	68	77	72	63
Saskatchewan	74	54	60	62	63	52	54
Alberta	96	94	108	116	98	92	87
British Columbia	83	85	106	111	97	99	80
Yukon, N.W.T., and Nunavut	5	4	7	9	3	4	5
Canada (Excluding NCR)	962	931	1,038	1,190	1,175	1,173	1,082
National Capital Region*	689	736	736	805	836	900	881
Canada (Including NCR)	1,651	1,667	1,774	1,995	2,011	2,073	1,963

* Federal intramural expenditures only.

Table 8 Federal expenditures on extramural R&D, by province and territories, 1997/1998 to 2003/2004

Province and territories	Year						
	1997/98	1998/99	1999/00	2000/01	2001/02 ^f	2002/03 ^f	2003/04
millions of dollars							
Total sciences							
Newfoundland and Labrador	17	21	28	34	30	45	58
Prince Edward Island	2	5	5	8	6	9	13
Nova Scotia	37	43	48	47	67	76	85
New Brunswick	17	24	21	23	33	30	42
Quebec	428	403	422	493	696	658	778
Ontario	610	659	735	744	1,068	952	1,282
Manitoba	36	37	43	54	57	63	57
Saskatchewan	22	32	42	56	70	63	64
Alberta	100	110	141	148	300	205	277
British Columbia	179	249	294	209	285	327	346
Yukon, N.W.T., and Nunavut	0	0	1	3	2	1	1
Canada	1,448	1,584	1,780	1,819	2,614	2,429	3,003
Natural sciences							
Newfoundland and Labrador	16	20	26	31	23	43	52
Prince Edward Island	2	5	5	7	5	8	12
Nova Scotia	34	40	45	42	55	72	71
New Brunswick	16	23	20	21	17	28	36
Quebec	406	382	394	460	602	614	667
Ontario	571	608	687	680	921	873	1,117
Manitoba	33	34	39	50	47	59	47
Saskatchewan	21	31	41	54	61	59	55
Alberta	94	104	133	137	266	192	239
British Columbia	168	237	279	191	244	307	296
Yukon, N.W.T., and Nunavut	0	0	1	2	1	1	1
Canada	1,362	1,482	1,670	1,675	2,242	2,256	2,593

Table 9 Federal expenditures on extramural S&T, by science, activity and by province and territories, 2003/2004

Science/Activity	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon, N.W.T., & Nvt.	Canada
millions of dollars												
Total sciences												
<u>R&D</u>												
Grants	57	13	78	41	727	1,173	52	58	265	341	1	2,806
Contracts	1	0	7	1	51	109	5	6	12	5	0	197
Total	58	13	85	42	778	1,282	57	64	277	346	1	3,003
<u>S&T</u>												
Grants	59	13	88	44	761	1,375	59	63	284	362	1	3,109
Contracts	1	0	11	2	88	148	8	7	13	10	2	290
Total	60	13	99	46	849	1,523	67	70	297	372	3	3,399
Natural sciences												
<u>R&D</u>												
Grants	51	12	65	35	616	1,009	42	49	227	291	1	2,398
Contracts	1	0	6	1	51	108	5	6	12	5	0	195
Total	52	12	71	36	667	1,117	47	55	239	296	1	2,593
<u>S&T</u>												
Grants	52	12	73	37	638	1,175	46	52	242	306	1	2,634
Contracts	1	0	11	1	87	142	8	7	13	9	2	281
Total	53	12	84	38	725	1,317	54	59	255	315	3	2,915
Social sciences												
<u>R&D</u>												
Grants	6	1	14	6	111	164	10	9	38	50	0	409
Contracts	0	0	0	0	0	1	0	0	0	0	0	1
Total	6	1	14	6	111	165	10	9	38	50	0	410
<u>S&T</u>												
Grants	7	1	15	8	124	200	13	10	42	56	0	476
Contracts	0	0	0	0	0	6	0	1	0	1	0	8
Total	7	1	15	8	124	206	13	11	42	57	0	484

Table 10 Federal expenditures on extramural S&T, by department or agency and by province and territories, 2003/2004

Department or agency	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon, N.W.T., & Nvt.	Canada
millions of dollars												
ACOA	17	6	18	17	0	1	0	0	0	0	0	59
CED(QUE)	0	0	0	0	23	0	0	0	0	0	0	23
CFI	4	1	8	3	93	137	1	14	50	44	0	355
CIHR	4	1	14	1	175	225	17	9	69	57	0	572
CSA	0	0	0	0	26	87	4	6	4	1	0	128
EC	0	0	5	1	4	190	1	2	4	4	1	212
F&O	0	0	1	0	0	0	0	0	0	1	0	2
GC	0	0	1	0	37	22	0	0	12	11	0	83
HC	0	0	0	0	1	9	0	0	0	1	0	11
IND	12	0	0	0	121	161	0	0	9	30	0	333
NDEF	0	0	10	0	55	57	2	0	6	3	0	133
NRC	4	2	5	4	19	23	2	2	9	54	0	124
NRCan	1	1	1	2	17	138	1	5	4	16	0	186
NSERC	11	1	19	9	150	256	19	19	69	83	0	636
SSHRC	7	1	14	7	120	167	11	10	42	55	0	434
TC	0	0	0	0	2	5	0	0	1	0	0	8
WEDC	0	0	0	0	0	0	1	2	14	9	0	26
Other	0	0	3	2	6	45	8	1	4	3	2	74
Total	60	13	99	46	849	1,523	67	70	297	372	3	3,399

Table 11 Federal expenditures on extramural R&D, by department or agency and by province and territories, 2003/2004

Department or agency	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon, N.W.T., & Nvt.	Canada
millions of dollars												
ACOA	17	6	18	17	0	1	0	0	0	0	0	59
CED (QUE)	0	0	0	0	23	0	0	0	0	0	0	23
CFI	4	1	8	3	93	137	1	14	50	44	0	355
CIHR	3	0	14	1	173	223	17	8	69	57	0	565
CSA	0	0	0	0	25	86	4	6	4	1	0	126
EC	0	0	0	0	0	58	0	1	1	0	0	60
F&O	0	0	1	0	0	0	0	0	0	1	0	2
GC	0	0	1	0	37	22	0	0	12	11	0	83
HC	0	0	0	0	1	1	0	0	0	0	0	2
IND	12	0	0	0	121	161	0	0	9	30	0	333
NDEF	0	0	6	0	25	33	0	0	6	2	0	72
NRC	4	2	5	4	19	23	2	2	9	54	0	124
NRCan	1	1	1	1	17	137	1	4	3	15	0	181
NSERC	9	1	16	8	133	223	16	17	59	72	0	554
SSHRC	6	1	13	6	109	146	10	9	38	50	0	388
TC	0	0	0	0	1	3	0	0	1	0	0	5
WEDC	0	0	0	0	0	0	1	2	13	9	0	25
Other	2	1	2	2	1	28	5	1	3	0	1	46
Total	58	13	85	42	778	1,282	57	64	277	346	1	3,003

Table 12 Intramural expenditures of federal scientific establishments, by science, activity and by province and territories, 2003/2004

Province and territories	Natural sciences		Social sciences		Total sciences	
	R&D	S&T	R&D	S&T	R&D	S&T
	millions of dollars					
Newfoundland and Labrador	23	58	0	3	23	61
Prince Edward Island	12	18	0	1	12	19
Nova Scotia	66	141	0	17	66	158
New Brunswick	30	51	0	3	30	54
Quebec	314	456	0	24	314	480
Ontario	348	480	2	36	350	516
Manitoba	63	120	0	8	63	128
Saskatchewan	54	87	0	2	54	89
Alberta	87	164	0	9	87	173
British Columbia	80	206	0	10	80	216
Yukon, N.W.T., and Nunavut	5	39	0	4	5	43
Canada (Excluding NCR)	1,082	1,820	2	117	1,084	1,937
National Capital Region	881	1,457	118	1,185	999	2,642
Quebec	39	140	10	141	49	281
Ontario	842	1,317	108	1,044	950	2,361
Canada (Including NCR)	1,963	3,277	120	1,302	2,083	4,579

Table 13 Intramural expenditures of federal scientific establishments, by department or agency, activity and by province and territories, 2003/2004

Department or agency	N.L.	P.E.I.	N.S.	N.B.	Que.*	Ont.*	Man.	Sask.	Alta.	B.C.	Yukon, N.W.T., & Nvt.	Canada	NCR
millions of dollars													
S&T													
AECL	0	0	0	0	0	157	5	0	0	0	0	162	6
AGR	2	13	10	9	47	48	24	37	38	18	0	246	70
CSA	0	0	0	0	98	0	0	0	0	0	0	98	7
EC	3	0	16	6	92	194	31	24	26	45	6	443	90
F&O	36	3	58	11	34	13	13	1	1	68	16	254	26
HC	0	0	1	0	8	11	26	0	1	5	0	52	228
NDEF	0	0	22	0	42	16	0	0	36	0	0	116	89
NRC	14	0	18	11	84	17	16	17	7	28	0	212	431
NRCan	2	0	12	12	39	23	1	1	41	35	14	180	276
STC	0	0	5	0	6	9	2	1	5	3	0	31	550
Other	4	3	16	5	30	28	10	8	18	14	7	143	869
Total	61	19	158	54	480	516	128	89	173	216	43	1,937	2,642
R&D													
AECL	0	0	0	0	0	157	5	0	0	0	0	162	6
AGR	1	10	8	7	40	39	21	29	33	14	0	202	36
CSA	0	0	0	0	94	0	0	0	0	0	0	94	1
EC	1	0	4	2	23	99	4	7	3	11	0	154	33
F&O	9	1	14	3	8	3	3	0	0	17	4	62	6
NDEF	0	0	22	0	42	16	0	0	21	0	0	101	66
NRC	11	0	14	10	69	12	11	14	3	22	0	166	398
NRCan	1	0	3	7	24	20	0	1	25	14	1	96	135
Other	0	1	1	1	14	4	19	3	2	2	0	47	318
Total	23	12	66	30	314	350	63	54	87	80	5	1,084	999

* Excluding the National Capital Region.

Table 14 Intramural expenditures of federal scientific establishments performing natural science activities, by department or agency, activity and by province and territories, 2003/2004

Department or agency	N.L.	P.E.I.	N.S.	N.B.	Que.*	Ont.*	Man.	Sask.	Alta.	B.C.	Yukon, N.W.T., & Nvt.	Canada	NCR
millions of dollars													
S&T													
AECL	0	0	0	0	0	157	5	0	0	0	0	162	6
AGR	2	13	10	9	47	48	24	37	38	18	0	246	65
CSA	0	0	0	0	98	0	0	0	0	0	0	98	7
EC	3	0	16	6	88	194	31	25	26	45	6	440	88
F&O	35	3	55	11	32	12	13	1	1	66	16	245	23
HC	0	0	1	0	8	11	26	0	1	5	0	52	208
NDEF	0	0	23	0	42	14	0	0	36	0	0	115	87
NRC	14	0	18	11	84	17	16	17	7	28	0	212	431
NRCan	2	0	12	12	39	23	1	1	41	35	14	180	276
Other	2	2	6	2	18	4	4	6	14	9	3	70	266
Total	58	18	141	51	456	480	120	87	164	206	39	1,820	1,457
R&D													
AECL	0	0	0	0	0	157	5	0	0	0	0	162	6
AGR	1	10	8	7	40	39	21	29	33	14	0	202	36
CSA	0	0	0	0	94	0	0	0	0	0	0	94	1
EC	1	0	4	2	23	99	4	7	3	11	0	154	33
F&O	9	1	14	3	8	3	3	0	0	17	4	62	6
HC	0	0	0	0	2	4	17	0	0	2	0	25	42
NDEF	0	0	22	0	42	14	0	0	21	0	0	99	66
NRC	11	0	14	10	69	12	11	14	3	22	0	166	398
NRCan	1	0	3	7	24	20	0	1	25	14	1	96	135
Other	0	1	1	1	12	0	2	3	2	0	0	22	158
Total	23	12	66	30	314	348	63	54	87	80	5	1,082	881

* Excluding the National Capital Region.

Table 15 Personnel of federal establishments performing S&T activities, by science, activity, category and by province and territories, 2003/2004

Science/ Activity/ Category	N.L.	P.E.I.	N.S.	N.B.	Que.*	Ont.*	Man.	Sask.	Alta.	B.C.	Yukon, N.W.T., & Nvt.	Sub- Total	NCR	Total
full-time equivalent ¹														
Total sciences														
<u>R&D</u> S&P	65	25	207	55	953	1,029	190	161	270	334	18	3,307	2,798	6,105
Total (R&D)	163	85	502	195	2,091	2,102	474	417	641	589	35	7,294	6,291	13,585
<u>S&T</u> S&P	188	56	546	175	1,397	1,525	383	250	620	793	129	6,062	8,761	14,823
Total (S&T)	437	156	1,258	405	3,228	3,451	985	697	1,455	1,590	282	13,944	20,763	34,707
Natural sciences														
<u>R&D</u> S&P	65	25	207	55	951	1,020	190	161	270	334	18	3,296	2,442	5,738
Total (R&D)	163	85	502	195	2,085	2,086	474	417	641	589	35	7,272	5,602	12,874
<u>S&T</u> S&P	171	52	518	169	1,353	1,458	361	247	597	756	123	5,805	5,308	11,113
Total (S&T)	392	146	1,102	388	3,048	3,165	896	675	1,370	1,491	249	12,922	10,878	23,800
Social sciences														
<u>R&D</u> S&T	0	0	0	0	2	9	0	0	0	0	0	11	356	367
Total (R&D)	0	0	0	0	6	16	0	0	0	0	0	22	689	711
<u>S&T</u> S&P	17	4	28	6	44	67	22	3	23	37	6	257	3,453	3,710
Total (S&T)	45	10	156	17	180	286	89	22	85	99	33	1,022	9,885	10,907

* Excluding the National Capital Region.

1. Including Administration of Extramural Programs Personnel.

Table 16 Personnel of federal establishments performing S&T activities, by department or agency and by province and territories, 2003/2004

Department or agency	N.L.	P.E.I.	N.S.	N.B.	Que*	Ont*	Man.	Sask.	Alta.	B.C.	Yukon N.W.T., & Nvt.	Sub-Total	NCR	Total
	full-time equivalent ¹													
ACOA	5	3	7	17	0	0	0	0	0	0	0	32	0	32
AECL	0	0	0	0	0	928	53	0	0	0	0	981	21	1,002
AGR	18	104	71	50	314	360	164	278	248	131	0	1,738	637	2,375
BOC	0	0	3	0	3	8	0	0	2	2	0	18	250	268
CCRA	7	0	0	0	0	11	12	0	0	10	0	40	116	156
CED(QUE)	0	0	0	0	50	0	0	0	0	0	0	50	0	50
CFIA	16	6	34	8	55	19	13	70	54	48	0	323	141	464
CIDA	0	0	0	0	0	0	0	0	0	0	0	0	238	238
CIHR	0	0	0	0	0	0	0	0	0	0	0	0	275	275
CMC	0	0	0	0	0	0	0	0	0	0	0	0	425	425
CMHC	0	0	8	0	16	28	0	0	14	16	0	82	66	148
CMN	0	0	0	0	0	0	0	0	0	0	0	0	173	173
CNSC	0	0	0	0	0	0	0	0	0	0	0	0	3	3
COL	0	0	0	0	0	0	0	0	0	0	0	0	12	12
CSA	0	0	0	0	502	0	0	0	0	0	0	502	48	550
CSTM	0	0	0	0	0	0	0	0	0	0	0	0	243	243
EC	28	2	132	50	526	1,097	183	154	174	313	56	2,715	548	3,263
F&O	208	29	390	98	243	91	94	5	10	422	116	1,706	197	1,903
FAC	0	0	0	0	0	0	0	0	0	0	0	0	60	60
FIN	0	0	0	0	0	0	0	0	0	0	0	0	288	288
GC	0	0	0	0	0	0	0	0	0	0	0	0	33	33
HC	0	0	10	7	100	141	213	6	11	55	0	543	2,199	2,742
HRSDC	0	0	0	0	0	0	0	0	0	0	0	0	6	6
IAND	0	0	0	0	0	0	0	0	0	0	0	0	6	6
IDRC	0	0	0	0	0	0	0	0	0	0	0	0	156	156
IND	0	0	1	0	1	1	0	0	0	0	0	3	910	913
JUS	0	0	0	0	0	0	0	0	0	0	0	0	69	69
NA	0	0	0	0	0	0	0	0	0	0	0	0	410	410
NDEF	0	0	208	0	410	201	0	0	423	0	0	1,242	718	1,960
NEB	0	0	0	0	0	0	0	0	24	0	0	24	0	24
NGC	0	0	0	0	0	0	0	0	0	0	0	0	267	267
NL	0	0	0	0	0	0	0	0	0	0	0	0	476	476
NRC	111	5	163	62	548	139	137	142	67	252	0	1,626	2,513	4,139
NRCan	19	0	92	97	303	172	2	4	323	251	43	1,306	2,298	3,604
NSERC	0	0	0	0	0	0	0	0	0	0	0	0	295	295
PCA	25	6	81	16	67	158	91	30	48	50	67	639	277	916
PW&GS	0	0	0	0	0	0	0	0	0	0	0	0	30	30
SGEN	0	0	0	0	0	0	0	0	0	0	0	0	35	35
SSHRC	0	0	0	0	0	0	0	0	0	0	0	0	172	172
STC	0	0	58	0	62	97	23	8	51	39	0	338	5,310	5,648
TB	0	0	0	0	0	0	0	0	0	0	0	0	460	460
TC	0	0	0	0	24	0	0	0	1	1	0	26	87	113
WEDC	0	0	0	0	0	0	0	0	5	0	0	5	0	5
Other	0	1	0	0	4	0	0	0	0	0	0	5	295	300
Total	437	156	1,258	405	3,228	3,451	985	697	1,455	1,590	282	13,944	20,763	34,707

* Excluding the National Capital Region.

1. Including Administration of Extramural Programs Personnel.

Table 17 Scientific and professional personnel of federal establishments performing S&T activities, by department or agency and by province and territories, 2003/2004

Department or agency	N.L.	P.E.I.	N.S.	N.B.	Que*	Ont*	Man.	Sask.	Alta.	B.C.	Yukon, N.W.T., & Nvt.	Sub-Total	NCR	Total
full-time equivalent ¹														
AECL	0	0	0	0	0	540	29	0	0	0	0	569	4	573
AGR	6	31	26	16	103	110	53	85	78	45	0	553	239	792
CCRA	7	0	0	0	0	11	12	0	0	10	0	40	116	156
CFIA	4	2	12	2	20	10	6	22	13	21	0	112	50	162
CMC	0	0	0	0	0	0	0	0	0	0	0	0	78	78
CMHC	0	0	5	0	11	18	0	0	10	11	0	55	51	106
CMN	0	0	0	0	0	0	0	0	0	0	0	0	98	98
CSA	0	0	0	0	241	0	0	0	0	0	0	241	5	246
CSTM	0	0	0	0	0	0	0	0	0	0	0	0	84	84
EC	22	1	103	38	238	501	89	75	86	133	27	1,313	282	1,595
F&O	90	14	190	47	124	36	38	2	4	209	54	808	102	910
FIN	0	0	0	0	0	0	0	0	0	0	0	0	226	226
HC	0	0	8	7	63	81	70	6	7	39	0	281	1,413	1,694
HRSDC	0	0	0	0	0	0	0	0	0	0	0	0	4	4
IND	0	0	1	0	1	1	0	0	0	0	0	3	639	642
NA	0	0	0	0	0	0	0	0	0	0	0	0	109	109
NDEF	0	0	92	0	175	77	0	0	148	0	0	492	474	966
NGC	0	0	0	0	0	0	0	0	0	0	0	0	38	38
NL	0	0	0	0	0	0	0	0	0	0	0	0	225	225
NRC	38	5	37	6	203	23	52	45	48	137	0	594	908	1,502
NRCan	10	0	51	52	182	70	1	2	174	164	21	727	1,250	1,977
PCA	11	3	20	7	16	41	33	13	25	21	26	216	67	283
STC	0	0	0	0	0	0	0	0	0	0	0	0	1,429	1,429
Other	0	0	1	0	20	6	0	0	27	3	1	58	870	928
Total	188	56	546	175	1,397	1,525	383	250	620	793	129	6,062	8,761	14,823

* Excluding the National Capital Region.

1. Including Administration of Extramural Programs Personnel.

Table 18 Personnel of federal establishments performing R&D activities, by department or agency and by province and territories, 2003/2004

Department or agency	N.L.	P.E.I.	N.S.	N.B.	Que*	Ont*	Man.	Sask.	Alta.	B.C.	Yukon N.W.T. & Nvt.	Sub-Total	NCR	Total
full-time equivalent ¹														
AECL	0	0	0	0	0	928	53	0	0	0	0	981	21	1,002
AGR	10	68	51	37	241	268	139	202	194	83	0	1,293	444	1,737
CSA	0	0	0	0	477	0	0	0	0	0	0	477	5	482
EC	2	0	8	3	173	434	17	56	14	52	0	759	155	914
F&O	51	7	114	27	68	21	22	1	2	125	34	472	49	521
HC	0	0	1	0	25	38	121	0	5	15	0	205	413	618
IDRC	0	0	0	0	0	0	0	0	0	0	0	0	111	111
IND	0	0	0	0	0	0	0	0	0	0	0	0	359	359
NDEF	0	0	197	0	406	169	0	0	198	0	0	970	507	1,477
NRC	84	0	95	56	413	116	114	125	0	169	0	1,172	1,793	2,965
NRCan	11	0	28	55	211	128	0	1	210	136	1	781	1,142	1,923
NSERC	0	0	0	0	0	0	0	0	0	0	0	0	257	257
STC	0	0	0	0	0	0	0	0	0	0	0	0	201	201
Other	5	10	8	17	77	0	8	32	18	9	0	184	834	1,018
Total	163	85	502	195	2,091	2,102	474	417	641	589	35	7,294	6,291	13,585

* Excluding the National Capital Region.

1. Including Administration of Extramural Programs Personnel.

Table 19 Scientific and professional personnel of federal establishments performing R&D activities, by department or agency and by province and territories, 2003/2004

Department or agency	N.L.	P.E.I.	N.S.	N.B.	Que*	Ont*	Man.	Sask.	Alta.	B.C.	Yukon N.W.T. & Nvt.	Sub-Total	NCR	Total
full time equivalent ¹														
AECL	0	0	0	0	0	540	29	0	0	0	0	569	4	573
AGR	3	20	16	11	73	80	42	60	58	26	0	389	135	524
CSA	0	0	0	0	235	0	0	0	0	0	0	235	2	237
EC	2	0	8	3	94	251	17	41	13	28	0	457	99	556
F&O	24	3	54	13	32	9	10	1	1	59	17	223	23	246
HC	0	0	1	0	18	19	37	0	1	15	0	91	225	316
IND	0	0	0	0	0	0	0	0	0	0	0	0	262	262
NDEF	0	0	86	0	174	65	0	0	75	0	0	400	320	720
NRC	30	0	26	0	175	0	52	45	0	117	0	445	606	1,051
NRCan	6	0	15	28	124	65	0	1	115	85	1	440	640	1,080
NSERC	0	0	0	0	0	0	0	0	0	0	0	0	13	13
STC	0	0	0	0	0	0	0	0	0	0	0	0	140	140
Other	0	2	1	0	28	0	3	13	7	4	0	58	329	387
Total	65	25	207	55	953	1,029	190	161	270	334	18	3,307	2,798	6,105

* Excluding the National Capital Region.

1. Including Administration of Extramural Programs Personnel.

Table 20 Personnel and expenditures of scientific establishments, by the department or agency and by province and territories, 2003/2004

Department or agency / province	Natural sciences				Social sciences				
	Personnel		Intramural expenditures		Personnel		Intramural expenditures		
	R&D	Total	R&D	Total	R&D	Total	R&D	Total	
	full-time equivalent		millions of dollars		full-time equivalent		millions of dollars		
ACOA									
N.L.	5	5	0	0	0	0	0	0	0
P.E.I.	3	3	0	0	0	0	0	0	0
N.S.	7	7	1	1	0	0	0	0	0
N.B.	17	17	2	2	0	0	0	0	0
ACOA - Total	32	32	3	3	0	0	0	0	0
AECL									
Ontario*	928	928	157	157	0	0	0	0	0
Manitoba	53	53	5	5	0	0	0	0	0
NCR (Ontario)	21	21	6	6	0	0	0	0	0
AECL - Total	1,002	1,002	168	168	0	0	0	0	0
AGR									
N.L.	10	18	1	2	0	0	0	0	0
P.E.I.	68	104	10	13	0	0	0	0	0
N.S.	51	71	8	10	0	0	0	0	0
N.B.	37	50	7	9	0	0	0	0	0
Quebec*	241	314	40	47	0	0	0	0	0
Ontario*	268	360	39	48	0	0	0	0	0
Manitoba	139	164	21	24	0	0	0	0	0
Saskatchewan	202	278	29	37	0	0	0	0	0
Alberta	194	248	33	38	0	0	0	0	0
B.C.	83	131	14	18	0	0	0	0	0
NCR (Quebec)	54	54	1	1	0	0	0	0	0
NCR (Ontario)	390	499	35	64	0	84	0	6	6
AGR - Total	1,737	2,291	238	311	0	84	0	6	6
BOC									
N.S.	0	0	0	0	0	3	0	0	0
Quebec*	0	0	0	0	0	3	0	1	1
Ontario*	0	0	0	0	0	8	0	1	1
Alberta	0	0	0	0	0	2	0	0	0
B.C.	0	0	0	0	0	2	0	1	1
NCR (Ontario)	0	0	0	0	76	250	28	66	66
BOC - Total	0	0	0	0	76	268	28	69	69
C&I									
NCR (Ontario)	0	0	0	0	0	28	0	2	2
CCRA									
N.L.	0	0	0	0	0	7	0	0	0
Quebec*	0	0	0	0	0	0	0	0	0
Ontario*	0	0	0	0	0	11	0	1	1
Manitoba	0	0	0	0	0	12	0	1	1
B.C.	0	0	0	0	0	10	0	0	0
NCR (Ontario)	0	0	0	0	0	116	0	8	8
CCRA - Total	0	0	0	0	0	156	0	10	10

Table 20 Personnel and expenditures of scientific establishments, by the department or agency and by province and territories, 2003/2004 (continued)

Department or agency / province	Natural sciences				Social sciences			
	Personnel		Intramural expenditures		Personnel		Intramural expenditures	
	R&D	Total	R&D	Total	R&D	Total	R&D	Total
	full-time equivalent		millions of dollars		full-time equivalent		millions of dollars	
CED (QUE)								
Quebec*	41	41	5	5	0	9	0	3
CFI								
NCR (Ontario)	43	43	9	10	0	0	0	0
CFIA								
N.L.	0	16	0	1	0	0	0	0
P.E.I.	7	7	1	1	0	0	0	0
N.S.	1	34	0	4	0	0	0	0
N.B.	0	8	0	1	0	0	0	0
Quebec*	17	55	1	5	0	0	0	0
Ontario*	0	19	0	2	0	0	0	0
Manitoba	8	13	1	1	0	0	0	0
Saskatchewan	32	70	3	5	0	0	0	0
Alberta	13	54	1	6	0	0	0	0
B.C.	9	48	2	7	0	0	0	0
NCR (Ontario)	45	141	8	14	0	0	0	0
CFIA - Total	132	464	17	47	0	0	0	0
CH								
NCR (Quebec)	0	0	0	0	0	55	2	5
CIDA								
NCR (Quebec)	21	136	1	12	6	102	1	9
CIHR								
NCR (Ontario)	269	275	45	45	0	0	0	0
CMC								
NCR (Quebec)	0	0	0	0	50	382	5	64
NCR (Ontario)	0	0	0	0	2	43	0	63
CMC - Total	0	0	0	0	52	425	5	127
CMHC								
N.S.	0	2	0	0	0	5	0	1
Quebec*	0	5	0	1	0	12	0	2
Ontario*	0	8	0	1	0	20	0	2
Alberta	0	4	0	0	0	10	0	1
B.C.	0	5	0	1	0	11	0	2
NCR (Ontario)	18	20	3	4	23	46	4	10
CMHC - Total	18	44	3	7	23	104	4	18
CMN								
NCR (Quebec)	23	138	2	24	0	0	0	0
NCR (Ontario)	0	35	1	6	0	0	0	0
CMN - Total	23	173	3	30	0	0	0	0
CNSC								
NCR (Ontario)	1	2	0	0	0	0	0	0
COL								
NCR (Ontario)	0	0	0	0	0	12	0	2

Table 20 Personnel and expenditures of scientific establishments, by the department or agency and by province and territories, 2003/2004 (continued)

Department or agency / province	Natural sciences				Social sciences				
	Personnel		Intramural expenditures		Personnel		Intramural expenditures		
	R&D	Total	R&D	Total	R&D	Total	R&D	Total	
	full-time equivalent		millions of dollars		millions of dollars	full-time equivalent	millions of dollars		millions of dollars
CSA									
Quebec*	477	502	94	98	0	0	0	0	0
NCR (Ontario)	5	48	1	7	0	0	0	0	0
CSA - Total	482	550	95	105	0	0	0	0	0
CSPS									
NCR (Ontario)	0	0	0	0	0	13	0	2	
CSTM									
NCR (Ontario)	0	0	0	0	0	243	0	34	
EC									
N.L.	2	28	1	3	0	0	0	0	
P.E.I.	0	2	0	0	0	0	0	0	
N.S.	8	132	4	16	0	0	0	0	
N.B.	3	50	2	6	0	0	0	0	
Quebec*	167	510	23	88	6	16	1	3	
Ontario*	434	1,097	99	194	0	0	0	0	
Manitoba	17	183	4	31	0	0	0	0	
Saskatchewan	56	154	7	25	0	0	0	0	
Alberta	14	174	3	26	0	0	0	0	
B.C.	52	313	11	45	0	0	0	0	
Yk.,N.W.T.& Nvt.	0	56	0	6	0	0	0	0	
NCR (Quebec)	143	367	32	55	0	3	0	0	
NCR (Ontario)	12	166	1	33	0	12	0	2	
EC - Total	908	3,232	187	528	6	31	1	5	
F&O									
N.L.	51	180	9	35	0	28	0	2	
P.E.I.	7	22	1	3	0	7	0	0	
N.S.	114	367	14	55	0	23	0	2	
N.B.	27	87	3	11	0	11	0	1	
Quebec*	68	222	8	32	0	21	0	2	
Ontario*	21	87	3	12	0	3	0	0	
Manitoba	22	92	3	13	0	2	0	0	
Saskatchewan	1	5	0	1	0	0	0	0	
Alberta	2	10	0	1	0	0	0	0	
B.C.	125	406	17	66	0	16	0	2	
Yk.,N.W.T.& Nvt.	34	116	4	16	0	0	0	0	
NCR (Ontario)	48	161	6	23	0	37	0	3	
F&O - Total	521	1,755	68	268	0	148	0	12	
FA&IT									
NCR (Ontario)	0	0	0	0	0	60	0	6	
FIN									
NCR (Ontario)	0	0	0	0	0	288	0	28	
GC									
NCR (Ontario)	32	32	3	3	1	1	0	0	

Table 20 Personnel and expenditures of scientific establishments, by the department or agency and by province and territories, 2003/2004 (continued)

Department or agency / province	Natural sciences				Social sciences			
	Personnel		Intramural expenditures		Personnel		Intramural expenditures	
	R&D	Total	R&D	Total	R&D	Total	R&D	Total
	full-time equivalent		millions of dollars		full-time equivalent		millions of dollars	
HC								
N.S.	1	10	0	1	0	0	0	0
N.B.	0	7	0	0	0	0	0	0
Quebec*	25	99	2	8	0	0	0	0
Ontario*	38	141	4	11	0	0	0	0
Manitoba	120	213	17	26	0	0	0	0
Saskatchewan	0	6	0	0	0	0	0	0
Alberta	5	11	0	1	0	0	0	0
B.C.	15	55	2	5	0	0	0	0
NCR (Ontario)	353	1,946	42	208	59	242	8	20
NCR (Quebec)	2	12	0	0	0	0	0	0
HC - Total	559	2,500	67	260	59	242	8	20
HRSDC								
NCR (Ontario)	0	0	0	0	0	6	0	1
IANC								
NCR (Quebec)	0	6	0	1	0	0	0	0
IDRC								
NCR (Ontario)	27	39	7	10	84	117	21	32
IND								
N.S.	0	1	0	0	0	0	0	0
Quebec*	0	1	0	0	0	0	0	0
Ontario*	0	1	0	0	0	0	0	0
NCR (Quebec)	0	441	0	40	10	13	1	1
NCR (Ontario)	349	372	42	45	0	84	0	12
IND - Total	349	816	42	85	10	97	1	13
JUS								
NCR (Ontario)	0	0	0	0	0	69	0	11
NA								
NCR (Quebec)	0	0	0	0	0	78	0	6
NCR (Ontario)	0	0	0	0	0	332	0	29
NA Total	0	0	0	0	0	410	0	35
NDEF								
N.S.	197	208	22	23	0	0	0	0
Quebec*	406	410	42	42	0	0	0	0
Ontario*	153	185	14	14	16	16	2	2
Manitoba	0	0	0	0	0	0	0	0
Alberta	198	423	21	36	0	0	0	0
B.C.	0	0	0	0	0	0	0	0
NCR (Quebec)	0	0	0	0	0	0	0	0
NCR (Ontario)	507	697	66	87	0	21	0	2
NDEF - Total	1,461	1,923	165	202	16	37	2	4
NEB								
Alberta	0	13	0	2	0	12	0	1
NFB								
Quebec*	5	5	1	1	0	0	0	0
NGC								
NCR (Ontario)	0	0	0	0	44	267	11	54

Table 20 Personnel and expenditures of scientific establishments, by the department or agency and by province and territories, 2003/2004 (continued)

Department or agency / province	Natural sciences				Social sciences			
	Personnel		Intramural expenditures		Personnel		Intramural expenditures	
	R&D	Total	R&D	Total	R&D	Total	R&D	Total
	full-time equivalent		millions of dollars		full-time equivalent		millions of dollars	
NL								
NCR (Quebec)	0	0	0	0	0	298	0	28
NCR (Ontario)	0	0	0	0	0	178	0	14
NL - Total	0	0	0	0	0	476	0	42
NRC								
N.L.	84	111	11	14	0	0	0	0
P.E.I.	0	5	0	0	0	0	0	0
N.S.	95	163	14	18	0	0	0	0
N.B.	56	62	10	11	0	0	0	0
Quebec*	413	548	69	84	0	0	0	0
Ontario*	116	139	12	17	0	0	0	0
Manitoba	114	137	11	16	0	0	0	0
Saskatchewan	125	142	14	17	0	0	0	0
Alberta	0	67	3	7	0	0	0	0
B.C.	169	252	22	28	0	0	0	0
NCR (Ontario)	1,793	2,513	398	431	0	0	0	0
NRC - Total	2,965	4,139	564	643	0	0	0	0
NRCan								
N.L.	11	19	1	2	0	0	0	0
N.S.	28	92	3	12	0	0	0	0
N.B.	55	97	7	12	0	0	0	0
Quebec*	211	303	24	39	0	0	0	0
Ontario*	128	172	20	23	0	0	0	0
Manitoba	0	2	0	1	0	0	0	0
Saskatchewan	1	4	1	1	0	0	0	0
Alberta	210	323	25	41	0	0	0	0
B.C.	136	251	14	35	0	0	0	0
Yk.,N.W.T.& Nvt.	1	43	1	14	0	0	0	0
NCR (Ontario)	1,142	2,298	135	276	0	0	0	0
NRCan - Total	1,923	3,604	231	456	0	0	0	0
NSERC								
NCR (Ontario)	257	295	33	38	0	0	0	0
PCO								
NCR (Ontario)	0	0	0	0	0	33	0	6
PCA								
N.L.	0	15	0	1	0	10	0	1
P.E.I.	0	3	0	0	0	3	0	0
N.S.	0	14	0	1	0	67	0	8
N.B.	0	10	0	1	0	6	0	2
Quebec*	0	10	0	1	0	57	0	8
Ontario*	0	28	0	2	0	130	0	21
Manitoba	0	39	0	3	0	52	0	6
Saskatchewan	0	16	0	2	0	14	0	2
Alberta	0	39	0	3	0	9	0	1
B.C.	0	30	0	2	0	20	0	2
Yk.,N.W.T.& Nvt.	0	34	0	3	0	33	0	4
NCR (Quebec)	0	40	0	3	0	237	0	24
PCA - Total	0	278	0	22	0	638	0	79

Table 20 Personnel and expenditures of scientific establishments, by the department or agency and by province and territories, 2003/2004 (concluded)

Department or agency / province	Natural sciences				Social sciences				
	Personnel		Intramural expenditures		Personnel		Intramural expenditures		
	R&D	Total	R&D	Total	R&D	Total	R&D	Total	
	full-time equivalent		millions of dollars		full-time equivalent		millions of dollars		
PSC									
NCR (Ontario)	0	0	0	0	0	46	0	4	
PSHRMAC									
NCR (Ontario)	0	0	0	0	0	15	0	3	
PW&GS									
NCR (Quebec)	20	30	2	3	0	0	0	0	
RCMP									
NCR (Ontario)	22	24	1	1	0	0	0	0	
SDC									
NCR (Quebec)	0	0	0	0	7	28	0	3	
NCR (Ontario)	0	0	0	0	0	10	0	1	
SDC - Total	0	0	0	0	7	38	0	4	
SGEN									
NCR (Ontario)	0	0	0	0	28	35	2	3	
SSHRC									
NCR (Ontario)	0	0	0	0	98	172	14	23	
STC									
N.S.	0	0	0	0	0	58	0	5	
Quebec*	0	0	0	0	0	62	0	6	
Ontario*	0	0	0	0	0	97	0	9	
Manitoba	0	0	0	0	0	23	0	2	
Saskatchewan	0	0	0	0	0	8	0	1	
Alberta	0	0	0	0	0	51	0	5	
B.C.	0	0	0	0	0	39	0	3	
NCR (Ontario)	0	0	0	0	201	5,310	20	550	
STC - Total	0	0	0	0	201	5,648	20	581	
TB									
NCR (Ontario)	0	0	0	0	0	460	0	44	
TC									
Alberta	0	0	0	0	0	1	0	0	
B.C.	0	0	0	0	0	1	0	0	
Quebec*	14	24	5	5	0	0	0	0	
NCR (Ontario)	5	27	1	6	0	60	0	4	
TC- Total	19	51	6	11	0	62	0	4	
WEDC									
Alberta	5	5	0	0	0	0	0	0	
Total	12,874	23,800	1,964	3,277	711	10,907	120	1,302	

* Excluding National Capital Region.

Table 21 Federal expenditures on extramural S&T, by selected census metropolitan areas and activity, 2001/2002 to 2003/2004

Census Metropolitan Area	2001/02		2002/03		2003/04	
	S&T Total	R&D Total	S&T Total	R&D Total	S&T Total	R&D Total
	millions of dollars					
Calgary	182	175	93	85	126	117
Saguenay	5	4	6	6	7	6
Edmonton	123	115	119	110	160	150
Greater Sudbury / Grand Sudbury	6	5	4	4	5	4
Halifax	61	56	72	65	82	70
Hamilton	68	65	64	60	80	76
Kingston	69	65	65	61	78	73
Kitchener	87	83	89	84	103	95
London	64	60	67	62	83	77
Montreal	652	509	516	472	613	558
Ottawa-Gatineau	330	294	274	239	582	420
Quebec	110	103	123	115	153	144
Regina	12	10	10	9	14	13
Saskatoon	60	58	55	52	54	50
Sherbrooke	28	27	25	23	33	30
St. Catharines – Niagara	10	9	9	8	12	9
St-John's	32	28	45	41	56	54
Toronto	439	416	408	364	492	452
Trois-Rivières	29	29	18	17	9	8
Vancouver	264	249	305	286	320	301
Victoria	29	26	29	25	36	32
Windsor	16	15	16	15	17	16
Winnipeg	58	55	65	61	63	55
Others	186	158	193	165	221	193
Total	2,920	2,614	2,670	2,429	3,399	3,003

Catalogued publications

Science, Technology and Innovation statistical publications

- 88-001-XIE [Science statistics](#)
88-003-XIE [Innovation analysis bulletin](#)
88-202-XIE [Industrial research and development, intentions \(with 2004 preliminary estimates and 2003 actual expenditures\) \(annual\)](#)
88-204-XIE [Federal scientific activities \(annual\)](#)
88F0006XIE [Science, Innovation and Electronic Information Division, working papers](#)
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- No. 1 Provincial distribution of federal expenditures and personnel on science and technology, 1997/1998 to 2003/2004 (February)
No. 2 Biotechnology scientific activities in federal government departments and agencies, 2004/2005 (March)

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No. 7 Federal government expenditures on scientific activities, 2005/2006^P (December)
No. 8 Total spending on research and development in Canada, 1990 to 2005^P, and provinces, 1990 to 2003 (December)

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- No. 1 [Federal government expenditures and personnel in the natural and social sciences, 1995/96 to 2004/05 \(January\)](#)
No. 2 [Provincial distribution of federal expenditures and personnel on science and technology, 1996-97 to 2002-03 \(January\)](#)
No. 3 [Industrial R&D statistics by region, 1994 to 2002 \(January\)](#)
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- No. 6 [Summary: Joint Statistics Canada – University of Windsor workshop on intellectual property commercialization indicators, Windsor, November 2004 \(March\)](#)
- No. 7 [Summary: Meeting on commercialization measurement, indicators, gaps and frameworks, Ottawa, December 2004 \(March\)](#)
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- No. 16 [Functional foods and nutraceuticals: The development of value-added food by Canadian firms \(September\)](#)
- No. 17 [Industrial R&D statistics by region 1994 to 2003 \(November\)](#)
- No. 18 [Survey of intellectual property commercialization in the higher education sector, 2003 \(November\)](#)
- No. 19 [Estimation of research and development expenditures in the higher education sector, 2003-2004 \(December\)](#)
- No. 20 [Estimates of Canadian research and development expenditures \(GERD\), Canada, 1994 to 2005, and by province 1994 to 2003 \(December\)](#)